

**Figure S1.** Comparison of measured PM2.5 mass concentration with (**a**) SMP (Solver for Mixture Problem)-estimated PM2.5 mass concentration and (**b**) extinction coefficient (b<sub>ext</sub>) during the sampling period [14].



**Figure S2.** Sensitivity of mass extinction efficiency for inorganic ions, EC, OM, NaCl, and crust as a function of the geometric mean diameter in the range of  $0.1-2.5 \mu m$  and geometric standard deviations in the range of 1.5-2.5.



**Figure S3.** Source-based mass concentrations and their contibution during the sampling period [14]. (a) Chemical-compound-based mass concentration. (b) Chemical-compound-based mass contribution, (c) Source-based mass concentration. (d) Source-based mass contribution.